APPENDIX J: DEVELOPMENT OF ALTERNATIVES

Several resource and use considerations guided the development of the alternatives. The most recent scientific data available (including GIS overlays of critical wildlife habitat, inventories, monitoring sites, and research sites) were used when developing the alternatives (see Chapter 3 for more information on resources). After careful consultation with park staff and user groups, separate maps were created for each existing use. The following resource and use information was critical in developing alternatives:

Vegetative cover
Soil type
Cultural Resources (archeological sites, mining-related structures, cabins and sites listed on the National Register of Historic Places)
Cabin locations
Streams used by anadromous fish
Bear dens
Wolf dens
Raptor sites
Winter trails
Weather stations
Snow survey sites
Ultraviolet light monitoring site
Glacier study sites
Long-Term Ecological Monitoring sites
Recent fires greater than 1,000 acres
Water quality sites
Swan sites
Research areas for bear, wolf, avian, caribou, moose, sheep, small mammal, and vegetation studies
Bear incident/encounter sites
Earthquake epicenters
Fault maps
Existing uses (mountaineering areas, snowmobile routes, dog mushing routes, skiing routes, horse trails, boating, hiking routes, hunting areas, and scenic air tour routes)

The landcover map (Map 2.1) is an example of resource information used in developing alternatives.

Several planning issues emerged through information gathered within the park, the agency, and through discussions with a variety of interested groups and individuals. Through the public scoping process we identified the following major issues to address in the plan:

1. Allocation of Uses:
The management plan should allocate individual, group, and commercial uses, the levels of those uses in different parts of the park, and seasonal components of use, to provide for visitor enjoyment and avoid conflicts among users, and to protect park resources. The following uses should be discussed:
·   Overnight uses, such as hiking, camping, and backpacking
·   Day uses, such as hiking and picnicking, including the NPS Discovery Hike and guided hikes by Kantishna-based lodges
·   Climbing, mountaineering, and glacier travel (address use levels and impacts on backcountry quota system, waste management, and use of bolts and fixed anchors)
·   Skiing, snow boarding, and snowshoeing
·   Dog sledding (recreational, commercial, freighting) and skijoring
·   Stock use and pets: stock use should include both day and overnight use, use of animals such as horses and llamas, and guidelines for preventing alien species (weed-free feeds)
·   Subsistence use (where potential conflicts between subsistence and recreational uses occur)
·   Recreational uses incidental to subsistence activities
·   Cabins for subsistence use and shared-use cabins
·   Other consumptive uses, such as sport hunting, trapping, and fishing; review hunting guide territories and appropriate number of guides and trips

- Mechanized, but non-motorized, uses such as bicycles (both on and off road); non-motorized boating: kayaks, rafts, canoes
- Motorized uses, including snowmobiles, snow cats, motor boats, personal watercraft, ORVs, ATVs (including Argo carts), and other motorized activities
- Aircraft landings
- Overflights (begin cooperative planning to address safety concerns and visitor experience)
- Questions on how future uses involving new technology would be managed

Aircraft Use:
- Establish guidelines for commercial, private, and NPS overflights
- Establish policies for airplane landings: determine capacity in the backcountry and evaluate safety issues
- Set policies for air taxi activities and scenic air tours that include glacier landings
- As aircraft use increases, review whether concessions permit or incidental business permit applies
- Address expansion of aircraft use in the Kantishna Hills, including airstrips formerly used for access to mining claims
- Address use of ultra-light aircraft
- Could use non-regulatory measures including voluntary guidelines to guide aircraft use considerations
- Hang gliding, paragliding, and base jumping

Concerns raised during scoping indicated that the plan should:
- Analyze concentrated versus dispersed strategies for various visitor activities in different parts of the park and preserve, such as day hiking and snowmobile use (Should there be designated temporary and seasonal snowmobile trails?)
- Address landing sites that have adjacent campsites
- Address river access locations, visitor uses, and transportation methods
- Address regulation of established commercial hikes
- Update management zoning in the Kantishna Hills based on recent land acquisition and the overall vision and objectives for these lands, including:
    1. Determine appropriate uses and levels
    2. Cross-reference to a reclamation plan
    3. Recognize that public uses adjacent to private lands will affect private lands
- Establish limits on overnight backcountry group sizes (private, educational, and commercial)
- Outline methods for counting users.
- Determine what types of revisions are needed to the quota system for backcountry units
- Recognize seasonal differences for levels of use, such as winter versus summer (winter activity/access areas include the south side, Broad Pass, Cantwell, Stampede, and Dry Creek)
- Establish guidelines for special events
- Clarify NPS management guidelines and specific applications to Denali

The plan must also address permits and registration required for NPS management. What are some appropriate management actions to consider? Are permits or mandatory registration a form of closure requiring a new regulation?

Because of increasing demand for a wide variety of both traditional and new uses in the backcountry of Denali National Park and Preserve, the backcountry management plan needs to address private and commercial uses. For each type of use, the planning process must determine whether it should be allowed as a guided or group activity. The plan must also determine whether an activity should be authorized by concessions permit, incidental business permit, or is a prohibited commercial venture.

2. Visitor Experience: The management plan should:
- Define and describe visitor opportunities for solitude
- Consider the need for minimal park administrative presence
- Discuss information, education, and orientation activities (publications, backcountry desk and exhibits, backcountry simulator, NPS programs such as Discovery Hikes, and trip-planning information)

3. Research and Resource Protection:

- The plan should discuss information and data collection on resource conditions and visitor use, research and other scientific uses, fire management, and other resource management issues
- The plan should clarify guidelines for research projects in the backcountry: limits, compliance process
- Apply "minimum requirement" (minimum tool) according to NPS wilderness management policies
- Address closures (trails, wildlife closures) and cross-reference to regulations and policies on closures
- Cross-reference to resources management plan for issues, such as:
  1. alien species
  2. threatened and endangered species
  3. wildlife disturbance
  4. vegetation damage
  5. waste management and sanitation
  6. cultural resources management (protection of archeological sites and historic sites (including mining sites)
  7. protection and use of historic cabins
  8. protection and use of historic trails (some are potential RS-2477 routes)
  9. protection of the natural sound environment (soundscapes)

4. Facility Development, Use, and Maintenance:

- The management plan should include guidance for visitor use facilities, such as trails, camp-grounds and campsites, signs, and cabins available for public use; the plan should define trail standards for different parts of the park
  1. Cross-reference to 1997 *Entrance Area and Road Corridor Development Concept Plan*: trails were proposed in that document where appropriate
  2. Determine whether additional designated trails should be established in heavily used backcountry areas
- Administrative facilities: camps (Friday Creek, 7,000-ft; 14,000 ft.), cabins available for administrative use (Parker, Gallop, others), communications infrastructure (includes radio antennas, cell sites, other telecommunications equipment); the plan should determine what restrictions should be made, especially in designated and suitable wilderness
- Construction and maintenance activities for backcountry facilities

5. Administration of Backcountry Management Program:

The plan should apply uniform standards to all related projects or activities:

- Staff training, organization, responsibilities, accountability
- Determine methods to improve the effectiveness of the quota system
  1. Permits
  2. Reservation system for certain parts of the park (complications for backcountry units include closures and the quota system)
  3. Fee collection
- Patrol and monitoring (cross-reference with research/resource management)
- Application of "minimum requirement" (minimum tool) according to NPS wilderness management policies.
- Trail construction (borrow sources, blasting, helicopter use).
- Needed improvements to facilities to reduce impacts on resources.
- Administrative use of cabins (cross-reference), trails, and backcountry units.
- Clarify policies on issues such as campfires and pets
- Closures (trails, wildlife closures): cross-reference park policy and regulations on closures.
- Determine impacts of administrative presence (trail maintenance, patrols, research, emergency response) on visitor experience

6. Coordination with other Land Management Agencies, cross-boundary issues:

- The plan should include guidance on how the National Park Service plans to coordinate with other agencies on issues such as land exchanges, rights of way for transportation and communications, RS-2477 routes, providing information to the public, research programs, and how Denali National Park and Preserve fits into a regional context.

- The plan should evaluate the Coffee River/Tokositna land exchange and other land exchanges, addressed briefly in the 1997 *Strategic Plan*.

7. Access:
- The plan should discuss the unique provisions in ANILCA for access to traditional activities, including subsistence and sport hunting, berry picking, fishing, and trapping.
- Other access provisions that should be addressed include access to inholdings and access for people with disabilities.